permeability and permittivity of the system, I_o, I_1, K_o, K_1 are modified Bessel functions of the zero and the first order of argument $r\gamma$. The boundary conditions for determining the constants A, D, B and E are given by Eqs.(3), where: $tg\,\Phi = 2\pi a/h_a$; $tg\,\Psi = 2\pi b/h_b$ and h_a, h_b are the periods of the helices and d is the radius of the inner conductor. The solution of the systems of Eqs.(1), (2) and (3) is in the form of Eq.(4), from which it is possible to determine β. In this equation

$$Y^2 = \left(\frac{\nu}{ak}\right)^2 .$$

For $d \to 0$, the equation is in the form of Eq.(5). Eq.(4) was employed to solve a number of practical cases. The results are illustrated in Figures 2 and 3, which show the dispersion curves for the helices wound in the same and in opposite directions, in the presence of a central

Scattering Properties of a Double-helical Coaxial Line with a Central Conducting Rod

conductor. The figures also show the dispersion curves for a helix-waveguide system and for a single helix; the latter are indicated by 'dashed' lines. The geometrical parameters of the helices, the inner conductors and the waveguides considered are indicated in the table on p 1257. There are 3 figures, 1 table and 6 references, 3 of which are Soviet and 3 English.

SUBMITTED: February 4, 1957

1. Waveguides--Mathematical analysis

SOV/58-59-8-18589

Translated from: Referativnyy Zhurnal Fizika, 1959, Nr 8, p 223 (USSR)

AUTHOR: Mikhalevskiy, V.S.

TITLE: The Dispersion Properties of a Double-Helix Coaxial Line in the Case of Higher-Order Waves

PERIODICAL: Uch. zap. Rostovsk.-n./D. un-ta, 1958, 68, Nr 8, pp 49-58

ABSTRACT: With allowance for field variations along the circumference of the helix, three systems are examined: two helices and a waveguide, two helices and a central conductor, and a system consisting only of two helices. Dispersion equations for the described systems are obtained as a result of joining together the fields. In so doing, it is shown that, for great retardations and in the region of high frequencies, the presence of a rod or a waveguide has a weak effect on the dispersion properties of the system. On the strength of this, the equations for the system consisting only of two helices are examined in greater detail in two particular cases: 1) The direction of winding and pitch are identical

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SOV/58-59-8-18589

The Dispersion Properties of a Double-Helix Coaxial Line in the Case of Higher-Order Waves

for the helices; and 2) The pitch is not identical for the helices, but they operate in the high-frequency region. In the latter case it is established that the dispersion equations of the double-helix system are close to the equations for the same helices taken separately.

N.M. Sovetov

Card 2/2

22(1)

SOV/47-59-2-14/21

AUTHOR: Mikhalevskiy, V.S.

TITLE: A Simple Model to Explain the Interference Phenomenon (Prostaya model' dlya ob"yasneniya yavleniya interferentsii)

PERIODICAL: Fizika v shkole, 1959, Nr 2, pp 62-64 (USSR)

ABSTRACT: The study of undulatory properties of light, particularly the interference phenomenon, is difficult in school for lack of simple demonstrations and models which show the most substantial details of the "mechanism" of forming in space stable fields of intensification and slackening of oscillations brought about by the interaction of wave systems coming from two coherent sources. To explain the interference picture obtained by means of Fresnel mirrors, the author offers a modified model by N.A. Umov, the description of which is contained in Professor A.K. Timiryazev's book. The model consists of 2 equal wire sinusoids representing the waves which come from 2 coherent oscillation points. To make the model, the school blackboard is used. On the points, nails are driven into the upper strip of the black-

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A Simple Model to Explain the Interference Phenomenon

board. The upper ends of the sinusoids have small loops permitting them to be turned round the points and moved to the other pair of nails. Thus a general picture of the 2 systems of coherent waves can be obtained, marking the points of intensification or abatement on the blackboard. There is 1 diagram.

ASSOCIATION: Gosudarstvennyy universitet, Rostov-na-Donu (State University, Rostov-na-Donu)

Card 2/2

84105
3/058/60/000/006/024/040
A005/A001

9,4230

Translation from: Referativnyy zhurnal, Fizika, 1960, No. 6, p. 289, # 14890

AUTHOR: Mikhalevskiy, V.S.

TITLE: Generation of Electromagnetic Oscillations by a Travelling Wave Tube With an External Tapped Helix

PERIODICAL: Uch. zap. Fiz.-matem. fak. Rostovsk.-n/D un-t, 1959, Vol. 46, No. 7, pp. 101-103

TEXT: Certain characteristics of the travelling wave tube generator with external tapped helix were investigated. The dependence of the generation conditions of one fixed wave on the variation of D, -the length of the section-, and d, -the distance between the adjacent sections-, was studied assuming the constancy of other geometric parameters of the helix. The possibility is stated of generation of one fixed wave over a sufficiently wide variation range of the values of the accelerating voltage, for D/d values a little greater than unity. See also RZhFiz 1956, No. 4, # 11177.

V.S. Mikhalevskiy

Translator's note: This is the full translation of the original Russian abstract

Card 1/1

9.4230

S/058/60/000/006/025/040
A005/A001

Translation from: Referativnyy zhurnal, Fizika, 1960, No. 6, p. 289, # 14891

AUTHOR: Mikhalevskiy, V.S.

TITLE: Generation of Electromagnetic Oscillations by a Travelling Wave Tube

PERIODICAL: Uch. zap. Fiz.-matem. fak. Rostovsk.-n/D un-t, 1959, Vol. 46, No. 7, pp. 105-107

TEXT: The experimentally measured dependence of the wave lengths excited in the oscillation line by the accelerating voltage is compared with the theoretically calculated dispersion characteristics for a decelerating helix line.

V.S. Miknalevskiy

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

9,1400

S/058/60/000/006/032/040
A005/A001

Translation from: Referativnyy zhurnal, Fizika, 1960, No. 6, p. 304, # 14971

AUTHORS: Ivanov, V.N., Mikhalevskiy, V.S.

TITLE: Waves of Higher Order in the Helix-Waveguide System

VB

PERIODICAL: Uch. zap. Fiz.-matem. fak. Rostovsk.-n/D un-t, 1959, Vol. 46, No. 7, pp. 109-114

TEXT: The dispersion characteristics are calculated for axial-symmetric waves in the helix-cylindric waveguide system. The conditions of normal and anomalous dispersion existence are determined.

V.S. Mikhalevskiy

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

c1047

S/109/61/006/003/003/018
E140/E135

9,4230 (also 1582)

AUTHORS: Malyshev, V.A., and Mikhalevskiy, V.S.

TITLE: On the Theory of the TWT-Oscillator With Weak Feedback

PERIODICAL: Radiotekhnika i elektronika, 1961, Vol.6, No.3, pp. 363-370

TEXT: In previous work the problem of the title has been treated only qualitatively. The present article attempts to derive certain features of operation of such oscillators using the cinematic approximation. The detailed mechanism for realization of feedback is not considered, it being assumed only that the feedback factor for a given space harmonic is much less than unity and independent of the generated frequency which must be close to one of the natural frequencies of the system. These conditions are best realized in oscillators with external feedback; in oscillators with internal feedback they can be satisfied only under the condition of negligibly small interaction of the modulated electron stream with the reflected wave. These conditions are not satisfied in reflex TWT. The delay system is considered in the form of a simple resonator with natural frequencies fairly closely

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21649
S/109/61/006/003/003/018
E140/E135

On the Theory of the TWT-Oscillator With Weak Feedback

spaced. It is assumed that measures have been adopted on the device for separation of the natural frequencies, for example by the use of a special filter in the feedback circuit, or by the use of systems with normal dispersion. This assumption permits neglect of the possibility of oscillation at several neighbouring frequencies. Finally, the analysis takes into account interaction of the flow only with a single definite space harmonic of the wave, uniquely defined by the phase velocity in the system. The analysis proceeds from the equation of motion of the electron, from which the Kepler's equation for the transit angle of the electron has been found by V.N. Shevchik (Ref.10):

$$\varphi = \varphi_0 - \frac{\mu e^{\frac{\gamma v_0}{\omega}}}{\rho\left(1+\frac{\gamma^2}{\beta^2}\right)} \sin\left(\omega t - \frac{v_e}{v_\phi}\varphi - \psi\right), \qquad (3)$$

where:

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S/109/61/006/003/003/018
E140/E135

On the Theory of the TWT-Oscillator With Weak Feedback

$$\operatorname{tg}\psi = \frac{1-\frac{\gamma^2}{\theta^2}}{2\frac{\gamma}{\theta}};\quad \theta = \frac{\omega}{v_0}\rho = \frac{\omega}{v_0}\left(1-\frac{v_0}{v_\phi}\right);\quad \mu = \frac{eB_1}{mv_0\omega\left(1-\frac{v_0}{v_\phi}\right)}; \qquad (4)$$

$$\varphi = \omega t - \omega\tau;\ \varphi_0 = \frac{\omega x}{v_0},$$

where: τ - time of electron entry into the system; γ - propagation constant; e - the electron charge; v_ϕ - the phase velocity of the wave; v_0 - the velocity of the undisturbed electron; Examining further the interactions taking place in the system, an equivalent circuit is found (no diagram given) in the form of a parallel combination of L, C, G and G_1 elements, where G_1 represents the load losses and G the device losses. Then the electron stream represents a conductance for which there is given the expression

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S/109/61/006/003/003/018
E140/E135

On the Theory of the TWT-Oscillator With Weak Feedback

$$Y_e = 2G_0 \frac{1 - J_0(X)}{X^2} e^{-j(\delta+\pi)} = G_e + jB_e,$$

where

$$G_0 = \frac{9e\omega I_0}{\gamma m M^2 v_0^3 (\theta^2 + \gamma^2)} = pI_0; \quad X = \frac{3e\omega U}{mMv_\phi v_0^2 (\theta^2 + \gamma^2)} = rU; \qquad (10)$$

$$\delta = \psi - \pi = \operatorname{arc\,tg} \frac{\theta^2 - \gamma^2}{2\gamma\theta} - \pi.$$

where X is the bunching parameter. Based on these relations the author then analyzes the operation of the oscillator, determining the output power and frequency of oscillation. In particular the question of electronic tuning is considered and an approximate expression found for the whole range of $\Delta\omega_p$

$$\Delta\omega_p = \frac{\sqrt{1 - 4N^2 v_0^2 \gamma^2}}{N\left|\left(B\omega_0 v_\phi + \frac{\gamma}{\beta_e}\right)\right|}; \quad \beta_e = \frac{\omega_0}{v_\phi}, \qquad (24)$$

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On the Theory of the TWT-Oscillator With Weak Feedback

where v_0 and v_Ψ are taken at the centre of the band. The electronic tuning range $\Delta\omega_p$ obtained experimentally is usually small because of the great value of the parameter B in the usual delay system. To broaden the range it is recommended to design the oscillator to satisfy the conditions

$$\left(\frac{\partial v_\Phi}{\partial\omega}\right)_0 = -\frac{4Q_H\gamma v_\Phi^2\left(1-\frac{1}{2Q_H}\right)^2}{\omega_0^2\left(2-\frac{1}{Q_H}\right)} \simeq -\frac{2Q_H\gamma v_\Phi^2}{\omega_0^2} = -\frac{Q_H\gamma\lambda^2}{2\pi^2}\left(\frac{v_\Phi}{c}\right)^2, \qquad (21)$$

where γ and c - wave length and speed of light in the free space. Finally optimal loading for a given value of X

$$\frac{J_1(X)}{X} = \frac{G}{G_0\cos\delta}; \quad \frac{1}{X}\left[\frac{1-J_0(X)}{X} - J_1(X)\right] = \frac{G_H}{G_0\cos\delta} \qquad (26)$$

The oscillator efficiency, time of establishment and load characteristics are also discussed. The authors' conclusion

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21649
S/109/61/006/003/003/018
E140/E135

On the Theory of the TWT-Oscillator With Weak Feedback

that a system with normal dispersion leads to stable wide-band operation contradicts the conclusion of E. Jones (Proc. I.R.E., 1952, 40, 4, 478) (Ref.1) and M. Denis (Ann. radioélectr., 1952, 7, 29, 169) (Ref.2), that systems with anomalous dispersion should be superior. This is due to the fact that these authors in their analysis completely ignored the reactance of the electron stream. The present work is in accordance with experimental results and is analogous in character to well-established formulae in the theory of the reflex klystron.
There are 3 figures and 14 references: 10 Soviet and 4 non-Soviet.

SUBMITTED: June 27, 1960

Card 6/6

30296
S/109/61/006/011/011/021
D266/D304

9,4230

AUTHORS: Ivanova, V.D., and Mikhaievskiy, V.S.

TITLE: Tuning traveling wave tube oscillators with the aid of plasmas

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 11, 1961, 1888 - 1893

TEXT: In conducting this study the author attempted to achieve two objectives: 1) To demonstrate experimentally the possibility of using plasmas for tuning a traveling wave tube oscillator, and 2) To derive theoretically the propagation characteristics of helices surrounded by a plasma. The interaction impedance in the presence of an infinite plasma is calculated using S.D. Gvozdover's method (Ref. 2: GITTL. 1956). It is found to be several orders of magnitude higher than the corresponding impedance in the absence of the plasma. The dispersion characteristics for an infinite plasma are calculated with the aid of formulae derived by the authors in a previous paper (Ref. 1: Radiotekhnika i elektronika,

4

Card 1/3

Tuning traveling wave tube ...

1959, 4, No. 11, 1932) and plotted in Fig. 2. The numbers on the curves refer to Table 1. The first number denotes the helix and the second one designates the plasma frequency ω_0. The dotted lines represent the dispersion characteristic in the absence of the plasma. The dispersion characteristics for a finite plasma are determined using Lopukhin's method (Ref. 4: GITTL, 1953) where a helically conducting ideal cylinder is assumed. The value of v/c for the No[illegible] helix is plotted for various values of b (radius of the plasma surrounding the helix). The dispersion characteristic can be roughly divided into two branches corresponding to short and long waves. The short wave branch is not very sensitive to a change in b/a. The long wave branch flattens out as b/a decreases and tends to the characteristic obtained in the absence of plasma. The experimental tube was electrostatically focused, had a helix of 5 mm radius, the spacing between the turns was 1.5 mm and b/[illegible] = 5. The pl[illegible] frequency was changed by varying the current flowing through the plasma. At zero current the oscill[illegible]ion frequency was [illegible]00 Mc/s. By increasing the current [illegible]he oscillation freque[illegible]cy changed discontinuously The amoun[illegible] of tuning was greatly dependent

Card 2/[illegible]3

Tuning traveling wave tube ...

on anode voltage. At its optimum value (U_a = 780 Volt) the tuning achieved was of the order of 1:2 in frequency. A qualitative agreement with theory is claimed.

SUBMITTED: March 2, 1961

Table 1.

Legend: 1 - Index of helices and frequency; 2 - radius of the helix, a, mm; 3 - spacing between the turns, h, mm; 4 - ω_o, Mc/s.

4

Таблица 1

1) Индексы спиралей и частоты	2) Радиус спирали a, мм	3) Шаг спирали h, мм	4) ω_o, Мгц
1	4,8	1,1	18750
2	4,8	1,8	9250
3			3100

Card 3/4 3

surrended by plasma

ACCESSION NO: AT3012846 S/2966/62/000/000/0100/0102

AUTHORS: Mikhalevskiy V. S.; Yevseyeva, R. Ya.

TITLE: Asymmetric waves in single spiral retarding line surrounding a plasma

SOURCE: Voprosy* elektroniki i elektrodinamiki sverkhvy*sokikh chastot. Taganrog, 1962, 100-102

TOPIC TAGS: plasma, asymmetric wave, electric field, dispersion equation, wave propagation

ABSTRACT: The dispersion characteristics of a spiral ZS surrounding a plasma has been considered analytically for the case of an axially asymmetric wave, with azimuthal component of magnetic and electric fields. The dispersion equation is obtained from L. A. Vaynshteyn (Elektromagnitny*ye volny*, "Sov. radio", 1957) under the assumption $\gamma \approx \gamma_1 = j\beta - \alpha$ where k = wave number and β = phase constant of wave propagation along the spiral. The result is represented graphically with v/c (phase velocity of wave over speed of light in vacuum) versus wave length for various plasma frequencies. It is concluded that plasma control of frequency in the first spatial resonance inconveniently requires working with low retardations

1/2

ACCESSION NO: AT3012846

and high plasma frequencies. Orig. art. has: 1 equation and 1 figure.

ASSOCIATION: none

SUBMITTED: 00	DATE ACQ: 07Oct63	ENCL: 00
SUB CODE: PH	NO REF SOV: 002	OTHER: 000

2/2

L 16182-63 EWT(1)/BDS/EEC(b)-2/ES(w)-2 AFFTC/ASD/ESD-3/AFWL/IJP(C)/SSD Pab-4

ACCESSION NR: AR3005175 S/0058/63/000/006/E027/E027

SOURCE: RZh. Fizika, Ab. 6 Zh168 65

AUTHOR: Mikhalevskiy, V. S.

TITLE: Effect of a dielectric layer on the dispersion characteristics of a single-helix slow-wave system situated in a plasma

CITED SOURCE: Sb. Vopr. elektroniki i elektrodinamiki sverkhvysokikh chastot. Taganrog, 1962, 103-106

TOPIC TAGS: Slow wave structure, plasma surrounding, effect of dielectric

TRANSLATION: The approximation of the helically conducting cylinder is used to obtain the dispersion equation of a helix surrounded by a plasma, with account of the parameters of the dielectric tube separating the plasma from the helix. The only mode considered is the one for which the field does not depend on the angular coordinate φ. It is shown that in practice, at a fixed slowing-down ratio and for a relative dielectric constant $\varepsilon < 10$, the introduction of the tube increases the wavelength λ by not more than 1%. I.Beluga.

DATE ACQ: 15Jul63 SUB CODE: GE, SP ENCL: 00

Card 1/1

L 16183-63 EWT(1)/EWG(k)/BDS/EEC(b)-2/ES(w)-2 AFFTC/ASD/ESD-3/IJP(C)/SSD Pz-4/
ACCESSION NR: AR3005174 Pab-4 AT S/0058/63/000/006/H027/H027

SOURCE: RZh. Fizika, Abs. 6 Zh167

AUTHORS: Mikhalevskiy, V. S.; Yevseyeva, R. Ya.

TITLE: Asymmetrical waves in single-helix slow-wave line surrounded by plasma

CITED SOURCE: Vopr. elektroniki i elektrodinamiki sverkhvysokikh chastot. Taganrog, 1962, 100-103

TOPIC TAGS: slow wave structure, plasma surrounding, backward wave oscillator

TRANSLATION: Using the approximation of the helically conducting cylinder, the dispersion of a helix surrounded by a plasma is calculated. The dispersion equation is valid for spatial resonance of any order, m. Plots of the slowing-down are presented for the cases $m = \pm 1$. It is shown that upon introduction of the plasma each dispersion curve splits into two. The shift of the wavelength for a specified slowing down depends on the plasma concentration. It is noted that plasma control of the frequency of a backwardwave oscillator, using a wave with $m = \pm 1$ in the helix, is made difficult by the need for obtaining a high plasma concentration. I. Beluga.

DATE ACQ: 15Jul63 SUB CODE: GE, SP ENCL: 00

Card 1/1

MIKHAILEVSKIY, V.S.

Two demonstrations of the resonance phenomenon. Izv.vys.uch.zav.; fiz. no.4:66-68 '62. (MIRA 15:9)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.
(Nuclear physics—Study and teaching)

ACCESSION NR: AT3012847 S/2966/62/000/000/0103/0106

AUTHOR: Mikhalevskiy, V. S.

TITLE: Effect of dielectric layer on dispersion characteristic of single spiral retarding systems placed in plasma

SOURCE: Voprosy* elektroniki i elektrodinamiki sverkhvy*sokikh chastot. Taganrog, 1962, 103-106

TOPIC TAGS: dispersion, plasma frequency, isotropic plasma, phase velocity, dielectric permeability, plasma

ABSTRACT: Simplied formulae are derived to calculate dispersion characteristics and the parameters in type LBV lamp with plasma frequency control. Dispersion characteristic equations for isotropic plasma layer with thickness d are written and then simplified on the assumption that the wave phase velocity v is much less than the speed of light, dielectric permeability $\epsilon < 10$, and functions $A_{00} \approx A_{11} \approx 0$. A graphic presentation of v/c versus λ (wave length in free space) indicates that the effect of the dielectric layer is a shift in the dielectric characteristics towards the direction of large λ, maintaining the general shape of the curve unchanged. Orig. art. has: 3 equations, 1 figure, and 1 table.

Card 1/2

MIKHALEVSKIY, Vadim Sergeyevich; IVANOV, V.N., dots., otv. red.; SHKORINOV, V.P., red.

[Principles of the theory of superhigh-frequency delay systems] Elementy teorii sverkhvysokochastotnykh zamedliaiushchikh sistem. Rostov-na-Donu, Izd-vo Rostovskogo univ., 1964. 187 p. (MIRA 17:6)

14(6) SOV/112-59-1-487

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 1, p 64 (USSR)

AUTHOR: Mikhalevskiy, V. V.

TITLE: Gidromontazh Erection-Work Experience at the Kakhovka Development

PERIODICAL: V sb.: Energ. str-vo. Vol 2, M.-L, 1958, pp 22-31

ABSTRACT: Bibliographic entry.

Card 1/1

L 44291-65 EWT(1) GS

ACCESSION NR: AT5011600 UR/0000/64/000/000/0104/0111 13 11 B+1

AUTHOR: Yampol'skiy, Zh. A., Mikhalevskiy, V. V.

TITLE: Controllable two-phase and single-phase reversible asynchronous micromotors (magneto-motor amplifiers)

SOURCE: Vsesoyuznoye soveshchaniye po magnitnym elementam avtomatiki, telemekhaniki, izmeritel'noy i vychislitel'noy tekhniki. Lvov, 1962. Magnitnyye elementy avtomatiki, telemekhaniki, izermitel'noy i vychislitel'noy tekhniki (Magnetic elements of automatic control, remote control, measurement and computer engineering); trudy soveshchaniya. Kiev, Naukova dumka, 1964, 104-111

TOPIC TAGS: reversible asynchronous motor, magnetomotor amplifier, two phase asynchronous motor, single phase asynchronous motor, magnetic amplifier

ABSTRACT: It is desirable to control asynchronous motors by acting directly on the mechanical parameters of such motors by means of small control signals acting on the magnetic circuit and representing simultaneously a part of a built-in amplifier. Back in 1949, Prof. L. I. Gutenmakher proposed (Avtorskoye svidatel'stvo No. 399833-III from 28/IV 1949) a velocity control by means of direct DC magnetization of the stators of asynchronous motors. However, the control power had to be on the order of several watts. A significant reduction of power was achieved by

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L 14291-65

ACCESSION NR: AT5011600

means of a magneto-motor amplifiers (MMA) utilizing magnetizing elements (see, e.g., Zh. A. Yampol'skiy, D. V. Svecharnik, V. V. Mikhalevskiy, Upravlyayemyy reversivnyy dvukhfaznyy asinkhronnyy elektrodvigatel', Avtorskoye svidatel'stvo No. 129730 from 23/X 1959, Byulleten' izobreteniy, 13, 1960). The present article discusses various fundamental constructive solutions of the MMA's. A two-phase experimental MMA was designed and produced at the "Teplopribor" scientific-research institute headed by D. V. Svecharnikov. It has an amplification factor of 1000 or more, and with a 1-mm air gap the sensitivity is of the order of 10^{-5} watts and the power amplification is of the order of 100. The authors also discuss in detail the design and experimental construction of single-phase MMA's. They note, however, that the theory and the methods of design of the MMA's are still only approximate and require further development. Orig. art. has: 2 figures.

ASSOCIATION: None

SUBMITTED: 29Sep64 ENCL: 00 SUB CODE: PR, EC

NO REF SOV: 006 OTHER: 000

Card 2/2

L 52047-65 EWP(d)/EWP(w)/EWA(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l) Pf-4 EM/GS
ACCESSION NR: AT5011609 UR/0000/64/000/000/0316/0320

AUTHOR: Mikhalevskiy, V. V.; Yampol'skiy, Zh. A.

TITLE: Use of magnetic elements for contactless turn indication with frequency conversion into an equivalent current

SOURCE: Vsesoyuznoye soveshchaniye po magnitnym elementam avtomatiki, telemekhaniki, izmeritel'noy i vychislitel'noy tekhniki. Lvov, 1962. Magnitnyye elementy avtomatiki, telemekhaniki, izmeritel'noy i vychislitel'noy tekhniki (Magnetic elements of automatic control, remote control, measurement and computer engineering); trudy soveshchaniya. Kiev, Naukova dumka, 1964, 316-320

TOPIC TAGS: tachometer, turn indicator, saturated transformer converter, synchronous generator, contactless turn control, frequency converter

ABSTRACT: The paper describes the design and use of magnetic elements in a matched set of devices earmarked for the measurement, indication, and control of turns. They comprise the TT-029 and TT031 tachometers, the PT-012 converter, and the contactless indicators SB-012, SB-022, and SB-022, capable of covering the ranges of 0-1000 and 0-10,000 turns/minute. Four synchronous generators serve as registering devices and are able to cover the entire domain of rotational fre-

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L 52047-65
ACCESSION NR: AT5011609

6

quencies. Two constructive modifications permit the rotor mounting on shafts rotating with rates up to 25,000 turns/min. "Eng. B. G. Klikshteyn also participated in the construction of the matched set. Various phases of the design and construction were developed by Ya. V. Boris, Yu. A. Sibiryakov, E. P. Mel'nik, V. N. Kokhan, and others." Orig. art. has: 6 formulas and 5 figures.

ASSOCIATION: None

SUBMITTED: 29Sep64 ENCL: 00 SUB CODE: EM, IE

NO REF SOV: 003 OTHER: 000

Card 2/2

L 6919-66 EWT(1)/EPA(s)-2 GS

ACCESSION NR: AT5011600 UR/0000/64/000/000/0104/0111

AUTHOR: Yampol'skiy, Zu. A.; Mikhalevskiy, V. V. 44,55

TITLE: Controllable two-phase and single-phase reversible asynchronous micromotors (magneto-motor amplifiers) 44,55

SOURCE: Vsesoyuznoye soveshchaniye po magnitnym elementam avtomatiki, telemekhaniki, izmeritel'noy i vychislitel'noy tekhniki. Lvov, 1962. Magnitnyye elementy avtomatiki, telemekhaniki, izmeritel'noy i vychislitel'noy tekhniki (Magnetic elements of automatic control, remote control, measurement and computer engineering); trudy soveshchaniya. Kiev, Naukova dumka, 1964, 104-111

TOPIC TAGS: reversible asynchronous motor, magnetomotor amplifier, two phase asynchronous motor, single phase asynchronous motor, magnetic amplifier

ABSTRACT: It is desirable to control asynchronous motors by acting directly on the mechanical parameters of such motors by means of small control signals acting on the magnetic circuit and representing simultaneously a part of a built-in amplifier. Back in 1949, Prof. L. I. Gutenmakher proposed (Avtorskoye svidatel'stvo No. 399633-XIII from 28/IV 1949) a velocity control by means of direct DC magnetization of the stators of asynchronous motors. However, the control power had to be on the order of several watts. A significant reduction of power was achieved by

Card 1/2

L 6919-66

ACCESSION NR: AT5011600

means of a magneto-motor amplifiers (MMA) utilizing magnetizing elements (see, e.g., Zh. A. Yampol'skiy, D. V. Svecharnik, V. V. Mikhalevskiy, Upravlyayemyy reversivnyy dvukhfaznyy asinkhronnyy elektrodvigatel', Avtorskoye svidatel'stvo No. 129730 from 23/X 1959, Byulleten' izobretateniy, 13, 1960). The present article discusses various fundamental constructive solutions of the MMA's. A two-phase experimental MMA was designed and produced at the "Teplopribor" scientific-research institute headed by D. V. Svecharnikov. It has an amplification factor of 1000 or more, and with a 1-mm air gap the sensitivity is of the order of 10^{-5} watts and the power amplification is of the order of 100. The authors also discuss in detail the design and experimental construction of single-phase MMA's. They note, however, that the theory and the methods of design of the MMA's are still only approximate and require further development. Orig. art. has: 2 figures.

ASSOCIATION: None

SUBMITTED: 29Sep64 ENCL: 00 SUB CODE: PR, EC

NO REF SOV: 006 OTHER: 000

PC

Card 2/2

M-2

YUGOSLAVIA/Cultivated Plants - Grains.

Abs Jour : Ref Zhur - Biol., No 7, 1958, 29672

Author : Mikhalich, V.
Inst : -
Title : Basic Problems in Winter Wheat Fertilization.

Orig Pub : Biljna proizv., 1957, 10, No 1, 1-15 (serbo-khorv.).

Abstract : No abstract.

Card 1/1

MIKHALICH, V.; GAYYER, M.; RYZHONKOV, D.I.

Investigating processes of simultaneous oxidation of silicon, manganese, and chromium in native alloy cast iron. Izv.vys. ucheb.zav.; chern.met. 5 no.11:20-22 '62. (MIRA 15:12)

1. Moskovskiy institut stali i splavov.
(Cast iron—Electrometallurgy) (Oxygen—Industrial application)

VAYNSHTOK, M.I.; MIKHALICH, V.; ARSENT'YEV, P.P.

Effect of aluminum and manganese on the plastic properties of basic open-hearth low-carbon steel. Izv. vys. ucheb. zav.; chern. met. 6 no.11:54-59 '63. (MIRA 17:3)

1. Moskovskiy institut stali i splavov.

GRIGORYAN, V.A. (Moskva); KHAN CHI-YUN [Hang Ch'in-yung] (Moskva); MIKHALIK, Ye. (Moskva)

Coefficient of iron diffusion in molten slag. Izv. AN SSSR. Otd. tekh. nauk. Met. i topl. no.2:36-41 Mr-Ap '62. (MIRA 15:4)
(Iron) (Diffusion) (Slag)

GRIGORYAN, V. A. (Moskva); MIKHALIK, Ye. (Moskva); KHAN' CHI-YUN [Han Ch'ih-yung] (Moskva)

Determining the kinetic characteristics of the reaction in the interaction of iron with molten slag. Izv. AN SSSR. Otd. tekh. nauk. Met. i topl. no.6:27-31 N-D '62. (MIRA 16:1)

(Iron—Metallurgy)

ACCESSION NR: AP4022722 S/0020/64/155/002/0392/0394

AUTHOR: Zhukhovitskiy, A. A.; Grigoryan, V. A.; Mikhalik, Ye.

TITLE: The surface effect of a chemical process

SOURCE: AN SSSR. Doklady*, v. 155, no. 2, 1964, 392-394

TOPIC TAGS: Thermoelectric phenomena, free energy conversion, thermodiffusion, electrodiffusion potential, temperature gradient, surface energy, phase contact area, surface tension, initial state, final state, nitrogen, capillary, gaseous mixture, interface, irreversible process, thermodynamics.

ABSTRACT: The subject under consideration in this article is the conversion of the free energy of a chemical process to surface energy. A chemical process may increase the phase contact area under certain conditions, i.e. it may affect the magnitude of surface tension. An increase of the interface under conditions of chemical equilibrium may result in an increasing number of moles of the surface-active intermediate compound which, generally speaking, is associated with the disappearance of the molecules in the initial and final states and ratios not in keeping with the equilibrium concentrations and the subsequent transition from one

Card 1/2

ACCESSION NR. AP4022722

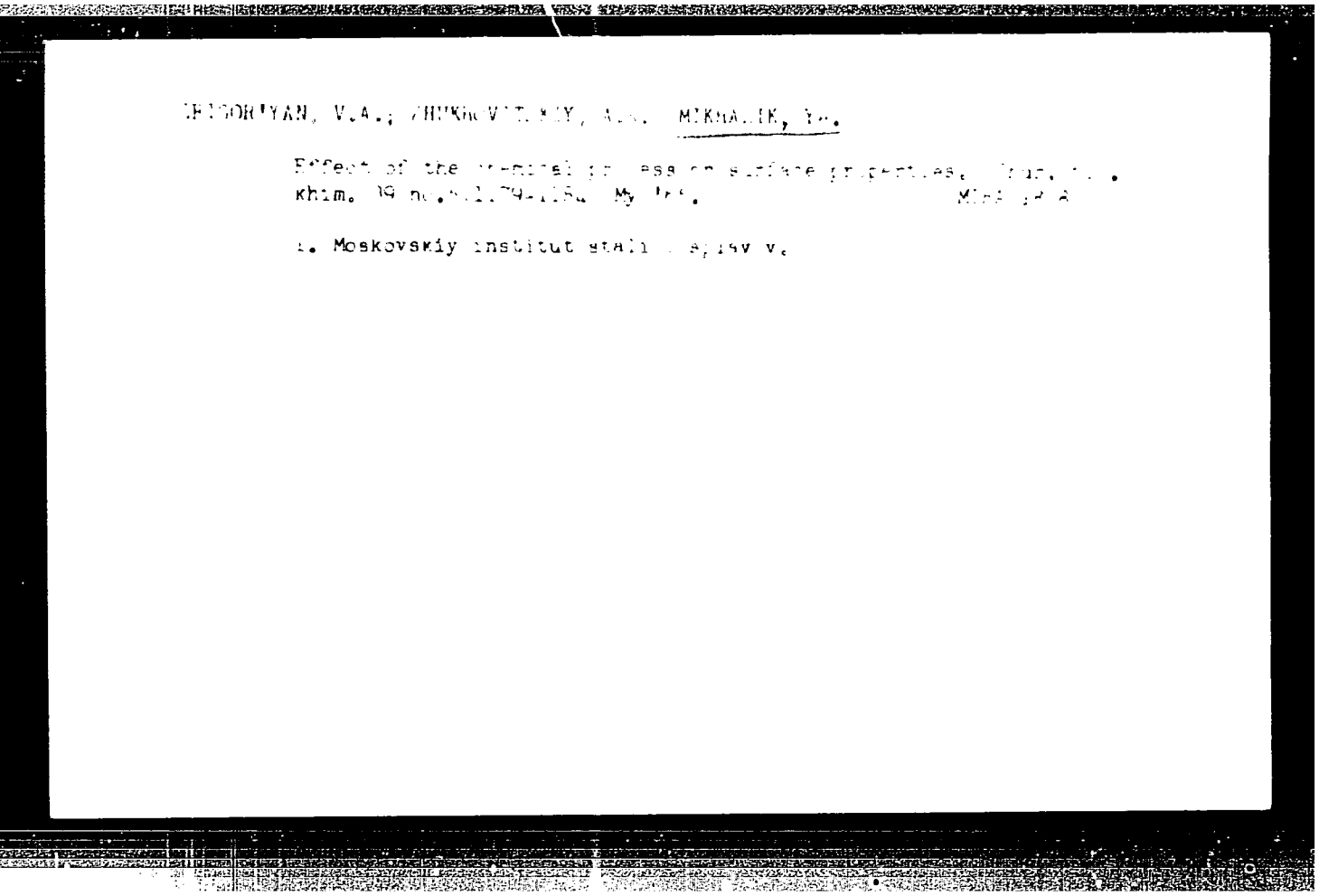
state into another. The effect of the capillary activity of the chemical process can be illustrated by four groups of tests. A number of researchers noted that in the chemical process of the interphase transition of components in the metal-slag system, the metal drop found in the slag changes its form. They ascribed that phenomenon to the chemical interphase transition. Another qualitative illustration of the reduction of surface tension (σ) as a result of the simultaneous chemical process is the self-emulsification initiated by the chemical reaction. The surface tension was measured by two methods: the maximum pressure in a bubble and the drop count method. The results were compared and found to be similar. Orig. art. has: 2 figures and 5 formulas.

ASSOCIATION: Moskovskiy institut stali i splavov (The Moscow Institute of Steel and Alloys)

SUBMITTED: 05Nov63 DATE ACQ: 08Apr64 ENCL: 00

SUB CODE: PH, CH NO REF SOV: 002 OTHER: 002

Card 2/2



ROY, D.L.; MIKHALIK, Ye.

Experimental check of the equation describing the surface activity of a chemical process. Zhur. fiz. khim. 39 no.2:510-514 F '65. (MIRA 18:4)

1. Moskovskiy institut stali i splavov.

MIKHALIN, G. I.

Pa-2T24

USSR/Metallurgy - Alloys Mar 1947
Diesel Engines - Bearings

"Economical Use of an Anti-friction Alloy," G I Mikhalin, 6 pp

"Energeticheskiy Byulleten" No 3

Discussion of Diesel engine bearings. Graphs and schematic drawings

2T24

MIKHALIN, G. I.

PA 16776

USSR/Engines, Diesel
Atomization

May 1947

"Explosion of Atomizers," G. I. Mikhalin, 3 pp

"Energeticheskiy Byulleten'" No 5

Discusses accidents arising from explosion of atomizers in Diesel engines.

16776

MIKHALIN, G. I.

PA 10/49T45

USSR/Engineering Aug 48
Engines, Diesel
Crankshafts

"Method for Measuring the Variation Between the Webs of High-Speed Diesel Crankshafts," G. I. Mikhalin, Orgkommunenergo, 3½ pp

"Energet Byul" No 8

Describes usual method for checking crankshaft misalignment by measuring distance between crank webs and gives official tolerances. Cases of crankshaft failure in imported Diesels show that ordinary methods for taking readings must be modified

10/49T45

USSR/Engineering (Contd) Aug 48

for high-speed engines to make crankshaft state approximate that in a heavy, slow-speed Diesel. This can be done (a) by clamping down on journals of the throw under examination, or (b) by putting 4.5-5 ats of compressed air on top of associated piston.

10/49T45

MIKHALIN, G. I.

PA 33/49T38

USSR/Engineering
Engines, Steam
Steam Condensers

Jan 49

"Determination of Steam Consumption by Steam Engines During Operation With a Mixing Condenser," G. I. Mikhalin, Orgkommunenergo, 5 pp

"Energet Byul" No 1

Proper operation of stationary and shipboard steam engines can be accomplished only after close observations on amount of steam the engines can generate. Experiments were conducted on mobile steam engines. Data obtained led to simple formula establishing heat balance in such engines.

33/49T38

MIKHALIN, G.I.

25684 Mikhalin, G.I. Isilindricheskie vitye pruzhiny dizeley energet byulleten, 1949, No. 7, 5. 1-7

SO: Letopis' Zhurnal'nykh Statey, Vol. 34, Moskva, 1949

MIKHALIN, G. I.

36071 Defekty okhlashdeniya otKrytykh forsunok (dizelya BS-70). Energet byulleten', 1949 No. 10 S. 7-8.

SO: Letopis' Zhurnal'nykh Statey, No. 49, 1949

MIKHALIN, G. I.

PA 153T15

USSR/Engineering - Cast Iron
Engines, Diesel

Dec 49

"Acceptance Requirements for Cast-Iron Diesel Parts," G. I. Mikhalin, 4 pp

"Energet Byul" No 12

Lists points to watch when accepting cast-iron Diesel parts, as to both quality of material and dimensions. Notes that quality is frequently lowered by lack of precise requirements when ordering parts from non-specialized plants. Table shows types of cast iron used for various parts.

153T15

MIKHALIN, G. I.

USSR/Electricity - Power Stations, Diesel Electric Cooling Equipment Apr 50

"Results of Testing the Worthington Model EC-12 Evaporator Water-Cooling Installation," G. I. Mikhalin, 6 pp

"Energet Byul" No 4

PA 161T32

Evaporator water-cooling installations are small enclosed cooling towers with forced draft, used at Diesel electric power stations. Their purpose is to cool engines as efficiently as possible, i.e.,

161T32

USSR/Electricity - Power Stations, Diesel Electric (Contd) Apr 50

with large flow of warm water and low temperature drop. Presents detailed report of tests on Worthington EC-12 installation.

161T32

USSR/Engineering - Engines, Internal Jul 50
Combustion
Cylinders

"Measures for Preserving the Covers of Working Cylinders in Internal Combustion Engines," G. I. Mikhalin

"Energet Byul" No 7, pp 29-33

Describes common forms of damage to cylinder covers and examines main causes of cracks and fractures. Details internal combustion engines and compressors produced by Kolomna, Russkiy Dizel', and Kharkov Tractor plants. Suggests covers be checked for

166T21

[redacted]

USSR/Engineering - Engines, Internal Jul 50
Combustion (Contd)

flaws before fitting and proposes number of measures to reduce excessive pressures likely to cause damage and to insure even power distribution through cylinder.

166T21

[redacted]

MIKHALIN, G. I.

Mikhalin, G. I.

Machine-Shop Practice

Repairing shafts by fitting-on sleeves and bushes., Energ. biul., no. 12, 1951.

Monthly List of Russian Accessions, Library of Congress, April 1952. UNCLASSIFIED

KIRILLIN, G. I.

Diesel Motor

Checking and testing the fuel system of compressorless diesel engines of electric power plants. Energ. biul. No. 3, 1952.

SO: Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

MIKHELIN, G. I.

Pumping Machinery

Repair of oil pumps, Energ. biul., No. 5, 1952

Monthly List of Russian Accessions, Library of Congress October 1952 UNCLASSIFIED

1. MIKHALIN, G. I.

2. USSR (600)

4. Gas and Oil Engines - Testing

7. Results of tests and actual use of the 4GCh 42.5/60 gas engine. Energ. biul. no. 8, 1952

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

1. MIKHALIN, G. I.

2. SSSR (600)

4. Gas and Oil Engines-Valve Gears

7. Intake and exhaust valves.
Energ. biul. No. 9, 1952

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

MIKHALIN, G.I.

Permissible discrepancy of the diameters of sleeves and pistons of working motor cylinders. Energetik 1 no.2:38 Jl '53. (MLRA 6:8)
(Gas and oil engines)

1. MIKHALIN, G.I.

2. USSR (600)

4. Electric Power Plants

7. Norms for the consumption of fuel and oil for Diesel electric power plants, energ. biul. no. 5, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

MIKHALIN, G.I.

Causes of damage to piston sets of high speed Diesel engines. Energ.biul. no.11:13-17 N '53. (MLRA 6:10)
(Diesel motor)

MIKHALIN, G.I.

Preventing the breaking of bushings of Diesel engine cylinders.
Energ.biul. no.5:1-4 My '54. (MLRA 7:5)
(Diesel engines)

MIKHALIN, G.I.

AID P - 809

Subject : USSR/Engineering

Card 1/1 Pub. 28 - 1/7

Author : Mikhalin, G. I.

Title : Data on failure of the connecting-rod bolts in the diesel engine

Periodical : Energ. byul., #9, 1-8, S 1954

Abstract : The study of stresses and remaining deformation in the bolts is described with relation to their failures. Methods of defect detection are outlined, including the use of the "defecto-scope". Five drawings and 2 tables. The tables give data on the diesel engines of Soviet, German and Swiss origin.

Institution : None

Submitted : No date

MIKHALIN, G. I.

AID P - 1312

Subject : USSR/Engineering

Card 1/1 Pub. 28 - 1/7

Author : Mikhalin, G. I.

Title : Measures for increased reliability of the diesel engine connecting rod bolts

Periodical : Energ. byul., #12, 1-6, D 1954

Abstract : This article gives information supplementing a previous article of the same author published in this journal, Oct. 1954 (AID P - 809) concerning the detection of defects in bolts and other engine parts. The magnetic defectoscope and its operation are described with illustrations. Two tables and 5 drawings.

Institution : None

Submitted : No date

MIKHALIN, G.I.

Suggested efficiency measures for improving the work of Diesel electric power plants. Energ.biul. no.3:26-31 Mr '55. (MLRA 8:5)
(Electric power plants)

AID P - 3879

Subject : USSR/Engineering

Card 1/1 Pub. 28 - 7/7

Author : Mikhalin, G. I.

Title : Selection of Babbitt and Method of Determination of Needed Quantity when Overhauling Bearings in Power Equipment

Periodical : Energ. byul., 11, 28-32, N 1955

Abstract : The author describes some bearings and the appropriate antifriction alloys used in their overhauling. He suggests a decreased thickness of alloy in antifriction bearings (the factor found to improve the efficiency in lining bearings) and gives mathematical formulae for calculation of the needed quantity of alloy for any bearing. Two sketches and tables.

Institution : None

Submitted : No date

MIKHALIN, G.I.

Fine cleaning of lubricating oil for internal combustion engines.
Energ.biul. no.1:28-32 Ja '56. (MLRA 9:5)
(Gas and oil engines--Oil filters)

Mikhalin, G. I.

2000

ENERGETICHESKII BYULLETIN

(Power Bulletin)

No. 4, April, 1956

D

MIKHALIN, G. I.: Operating Experience With the Ingersoll Rand Engine. Gives a list of defects that were encountered in operation and of the steps that were taken to overcome them.

was

MIKHALIN, G.I.

Removal of scale from cooling passages of internal combustion engines. Energetik 4 no.1:38-39 Ja '56. (MIRA 9:4)
(Gas and oil engines--Cooling)

MIKHALIN, G.I.

Cooling stationary diesel engines. Energ.biul. no.6:16-21 Je '56.
(MLRA 9:8)

(Diesel engines--Cooling)

MIKHALIN, G.I.

Defects of the 8ZS-23QR engine and their elimination. Energ.biul. no.10:23-30 O '56. (MLRA 9:11)

(Diesel engines)

MIKHALIN, G.I., inzh.; INDELBAUM, V.S., red.; SHNEYEROV, S.A., red.izd-va; VOLKOV, S.V., tekhn.red.

[Mechanization of heavy and time-consuming work in the servicing and repairing of internal combustion engines] Mekhanizatsiia trudoemkikh protsessov pri obsluzhivanii i remontakh dvigatelei vnutrennego sgoraniia. Moskva, Izd-vo M-va kommun. khoz. RSFSR, 1957. 95 p. (MIRA 11:5)

(Gas and oil engines--Maintenance and repair)

[illegible], U.I.

Fuels for diesel generators. Electric [illegible]

(Fuel, (Electric generators)

MIKHALIN, G.I.

On the operation of internal combusion engines. Energetik 5 no.10: 38-39 O '57. (MIRA 10:12)
(Gas and oil engines)

MIKHALIN, G.I.

Cases of connecting rod breakdown in Skoda 8S230R motors and measures for preventing it. Energ. biul. no.8:4-9 Ag '57.
(Connecting rods) (Electric motors) (MLRA 10:8)

MIKHALIN, G.I., inzh.

Low-melting safety plugs for locomobile boilers. Bezop.truda v prom. 2 no.4:16-17 Ap '58. (MIRA 11:4)
(Boilers--Safety appliances)

AUTHOR: Mikhailin, G.I. [illegible]

TITLE: The Thermal Processing of Diesel Parts Using Induction Heating (Termoobrabotka detaley dizeley pri pomoshchi induktsionnogo nagreva)

PERIODICAL: Energeticheskiy byulleten', 1958, Nr [illegible], pp [illegible] (USSR)

ABSTRACT: Where necessary [illegible] engine parts may be subjected to thermal processing or the spot by heating with an electr[illegible]. The coil is either wound [illegible] a heat-insulated, fire-resistant [illegible] containing the [illegible] (e.g. piston), or directly round the part itself with requisite insulation (Figure [illegible]). The formula [illegible] ting the electr[illegible] thermal and dynam[illegible] of the process are given and the re[illegible] [illegible] Simplified formulae are given for determining [illegible] ber of turns in the winding at a [illegible] power required for the thermal processing [illegible] king into account the [illegible] in the winding [illegible] intensity at [illegible] [illegible]

Card 1/2

The Thermal Processing of Diesel Parts, Using Induction Heating

There are 4 tables, 4 graphs and 1 diagram.

1. Diesel engine--Parts--Thermal processes--Theory

Card 2/2

AUTHOR: Mikhalin, G.I., 91-58-6-34/39

TITLE: Correspondence With Readers (Perepiska s chitatelyami), Joining the Steampipes of Locomotive Boilers (O soyedinenii paroprovodov lokomobil'nykh kotlov)

PERIODICAL: Energetik, 1958, Nr 6, p 35 (USSR)

ABSTRACT: In reply to a question from Zkharov (Starokonstantinov 2 Station, Southwest railroad) an outline is given of the conditions under which it is permissible to connect the steam-pipes of two locomobiles to work one off the other.

AVAILABLE: Library of Congress

Card 1/1 1. Steam pipes-Performance

МИХАЛИН, Г.И.

AUTH. : Mikhalin, G.I. 91-58-7-21/27

TITLE: Electrodes for the Welding of Cracks in the Cylinder Blocks of Internal Combustion Engines (Elektrody dlya zavarki treshchin block-tsilindrov dvigateley vnutrennego sgoraniya).

PERIODICAL: Energetik, 1958, Nr 7, p 37 (USSR).

ABSTRACT: The author answers the question of A.V. Andreyev (Ventspils) on the kind of electrodes to be used. The following bimetallic electrodes can be utilized: Nazarov, steel-copper, copper-steel and Monel-metal electrodes. The characteristics of these electrodes are given. The welding is to be carried out by d.c. with reversed polarity. The author stresses the necessity of a good aeration of operating area in order to avoid poisoning during the welding.

1. Welding electrodes--Selection 2. Cast iron--Welding

Card 1/1

AUTHOR: Mikhalin, G.I., Engineer SOV-91-58-10-28/35

TITLE: The Mechanization of the Servicing of Diesels (Mekhanizatsiya obsluzhivaniya dizeley)

PERIODICAL: Energetik, 1958, Nr 10, pp 30 - 34 (USSR)

ABSTRACT: The most labor-consuming processes in the servicing of medium and high-powered diesels include the rotation of the crankshaft, the feeding of fuel or oil into the service tanks and the pumping of the oil by means of a hand-pump before the unit is started up. The manual rotation of the crankshaft requires 2 - 5 workers, depending on the type of diesel, whereas with mechanization only one worker is needed. The author then describes three methods for the rotation of the crankshaft, all of them electrically-driven. 1) A device involving the use of gearing, which has been successfully used for 7 years. 2) A device with a driving gear, which has given reliable service for 17 years. 3) A device consisting of an electric drive and push-rods (completed at the suggestion of P.I. Tyapkin at the main pumping-station of the "Mosochistvod" combine). The author recommends the use of a type RM-250-1-Shch reducer from the "Krasnyy metallist" works, having a gear ratio of 48.57, a capacity of 5.7 kw

Card 1/2

with the driving shaft revolving at 1,420 rpm. The author then lists a number of formulae designed to help the servicing personnel to make the elementary calculations necessary for the correct selection of the parts. The author warns that in practice the power estimated should be increased by about 8-10% due to the power lost in the mechanism itself. He then proceeds to describe a method of feeding fuel and oil into supply tanks by compressed air. The fuel or oil flows by force of gravity out of a main storage tank into a cylindrical, hermetically-sealed tank. When the latter is sufficiently full, compressed air is let in, and forces the fuel to the place where it is required. The same system is used for feeding oil into the lubricating system of an engine before it is started. This system is widely used in many branches of industry, and has proved itself reliable in many electric power-stations. There are 4 diagrams.

1. Diesel engines--Maintenance

MIKHALIN, G., inzh.

Analyze causes of accidents in city power plants. Zhil.-kom. khoz. 8 no. 7:10-11 '58. (MIRA 11:8)
(Electric power plants)

25(1);8(0) PHASE I BOOK EXPLOITATION SOV/2029

Indenbaum, V.S., Engineer, G.I. Mikhalin, Engineer, and M.A. Sluchayev, Engineer, Deceased

Montazh energeticheskogo oborudovaniya; kratkoye spravochnoye posobiye (Installation of Power Equipment; a Concise Manual) Moscow, Mashgiz, 1959. 419 p. Errata slip inserted. 13,000 copies printed.

Ed.: V.N. Yakovlev; Ed. of Publishing House: G.A. Molyukov, Engineer; Tech. Ed.: A.Ya. Tikhanov; Managing Ed. for Reference Literature: V.I. Krylov, Engineer; Ed. of Graphs and Charts: V.G. Karganov.

PURPOSE: This book is intended to serve as a manual for engineers and technicians engaged in the installation of pipelines and power equipment.

COVERAGE: This manual is divided into three parts, the first of which deals with the installation of pipelines, the second with

Card 1/13

turbines and generators, and the third with internal combustion engines used in power stations, In Part I Engineer V.S. Indenbaum reviews the existing official regulations and approved methods to be followed in the installation of pipelines for water, steam, and gas in various industrial plants. The proper size, quality, and general characteristics of pipes and tubular stock are listed according to use. Test procedures for pipelines are specified, and a number of illustrations show ways of joining pipes. Engineers V.S. Indenbaum and M.A. Sluchayev (deceased) prepared Part II in which they deal with the installation of Soviet-made and imported power equipment such as steam turbines, turbocompressors, and various pumps. A step-by-step description is given of the proper installation procedures for this equipment, from the inspection of the foundations to the final adjustment of the rotor. Specific instructions are given for the starting and running-in procedures for the new machinery followed by a discussion of possible sources of operational troubles. The last part of the book, written by Engineer G.I. Mikhalin, deals with the installation of stationary internal combustion engines. The author briefly reviews the types of Soviet and imported Diesel engines together with the auxilliary equipment, and proceeds to describe the assembly sequence for stationary Diesels

and generators. The text covers the checking and installation of the crankshaft, cylinders, valves, fuel pumps, and other engine components including the pneumatic starting device. Explicit instructions are given for starting operations after assembly. No personalities are mentioned. There are no references.

PART I. MANUFACTURE AND INSTALLATION OF POWER-STATION PIPING
ENGINEER V.S. Indenbaum

and generators. The text covers the checking and installation of the crankshaft, cylinders, valves, fuel pumps, and other engine components including the pneumatic starting device. Explicit instructions are given for starting operations after assembly. No personalities are mentioned. There are no references.

PART I. MANUFACTURE AND INSTALLATION OF POWER-STATION PIPING
ENGINEER V.S. Indenbaum

Installation of Power Equipment (Cont.)

Installation of Power Equipment (Cont.)

Installation of Power Equipment (Cont.)

AVAILABLE: Library of Congress

GO/bg
8-10-59

Card 13/13

AUTHOR: Mikhalin, G.I. SOV/91-59-1-16/26

TITLE: On the Prophylactic Inspection and Repair of the Locomobile (O profilakticheskom osmotre i remonte lokomobilya)

PERIODICAL: Energetik, 1959, Nr 1, p 32 (USSR)

ABSTRACT: S.F. Artemov from the settlement of Amzya, BASSR, asks the following questions: Is it necessary to stop the locomobile at the end of every shift? What kind of periodical inspection do the parts of a locomobile require? A detailed answer is given by the author.

Card 1/1

8 (6) SOV/91-59-4-23/28

AUTHOR: Mikhalin, G. I.

TITLE: The Location of the Split Planes of the Crankshaft Bearings of a Locomobile Steam Engine (O razpolozhenii ploskosti raz"yema korennykh podshipnikov parovoy mashiny lokomobilya)

PERIODICAL: Energetik, 1959, Nr 4, p 37 (USSR)

ABSTRACT: The article is an answer to a question submitted to this periodical by A. S. Ganenko. The steam engine of the locomobile SK-250 has inclined crankshaft bearings, because this simplifies the design of the engine and overhaul operations (crankshaft must not be lifted to a great height when it is installed). The split is usually inclined at an angle of 30°, although it would be more suitable for increased strength to have an angle of $45\text{-}50^{\circ}$. However, such an angle is not used since it complicates the frame design.

Card 1/1

3(6)
AUTHOR: Mikhalin, G.I., Engineer

TITLE: The Efficient Organization of the Fuel Supply of Diesel-Electric Power Plants

PERIODICAL: Energetik, 1959, Nr 7, pp 30-35

ABSTRACT: Fuel for Diesel engines should be selected according to the basic physical and chemical properties. The first group refers to the cetane number and the second group refers to viscosity, ash, coke water and chemical admixtures and ignition temperatures. The author explains in detail the influence of the aforementioned factors. He furnishes recommendations for preparing fuel for ignition in the Diesel engines by different filtration methods and by washing it with water. Filters and centrifuges used for separating water from Diesel engine fuel are described. Finally, the author furnishes recommendations for establishing the monthly fuel consumption of power plant Diesel engines. The fuel consumption of individual engines should be established by calibrated measuring tanks.

Card 1-2

SOV/91-59-7-16/21

The Efficient Organization of the Fuel Supply at Diesel-Electric Power Plants

There are 6 diagrams.

Card 2/2

MIKHALIN, G.I.

Location of the parting plane of main engine bearings in boiler-engine units. Energetik 7 no.4:37 Ap '59. (MIRA 12:5)
(Bearings (Machinery)) (Steam engines)

MIKHALIN, G., inzh.

Good maintenance of Diesel engines. Zhil.-komm.khoz. 9 no.8:27-29 '59. (MIRA 12:11)
(Diesel engine--Maintenanace and repair)